bluebird bio, Inc.

Vermont New Product Launch Report

NDC	DRUG PROD DESC	INTRODUCED TO MARKET DATE
73554-1111-01	Lyfgenia 1 Suspension for IV infusion 20mL containing 1.7 to 20 x 10^8 cells/mL (1.4 to 20 x 10 ^8 CD34+ cells/mL)	2/1/2024

WAC AT INTRODUCTION
3100000.00

MARKETING PRICING PLAN

Marketing Plan: bluebird bio markets LYFGENIA as a one time, autologous gene therapy for individuals living with SCD who are 12 years of age or older with a history of vaso-occlusive events, via traditional marketing and promotional channels frequently used in the pharmaceutical or biotechnology industry. These include professional promotion and detailing, digital, print and paid search advertising directed to health care providers, patients and caregivers. bluebird bio also participates in industry conferences focused on hematology, gene therapy and sickle cell disease.

Pricing Methodology Summary: bluebird bio's LYFGENIA represents a fundamental paradigm shift for a life-threatening disease (i.e., sickle cell disease or SCD) that to date has had very limited treatment options for impacted patients and their families. bluebird bio based the WAC price that was set for LYFGENIA on four key value drivers: the clinical benefit derived from LYFGENIA (i.e. resolution of vaso-occlusive events [VOEs] and sustained improvement in total hemoglobin levels), the impact of LYFGENIA on patient and caregiver well-being, relative cost impact of LYFGENIA with current standard of care (SoC] (hydroxyurea, red blood cell exchange) [note that newer disease-modifying therapies such as voxelotor are not yet considered SoC), and the broader societal impact of LYFGENIA including future contributions of both patients and their caregivers.

The company's economic modeling was the basis for the ultimate WAC price set for LYFGENIA, which also considered factors material to downstream patient, family, and societal impact but that are more difficult to quantitatively capture (e.g., the highly innovative nature of the therapy).

MARKETING PRICING NONPUBLIC	**ESTIMATED PATIENTS**	**BREAKTHROUGH THERAPY INDICATOR**
Y	20,000	Y

PRIORITY REVIEW INDICATOR	**ACQUISITION DATE**	**ACQUISITION PRICE**
Y	N/A	N/A

ACQUISITION PRICE NONPUBLIC	**ACQUISITION PRICE COMMENT**
N/A	N/A

GENERAL COMMENTS